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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/686,336	10/11/2000	Gordon D. Ford	06810/00501	4737

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EXAMINER

WORKU, NEGUSSIE

ART UNIT PAPER NUMBER

2626

7

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/686,336

Applicant(s)

FORD ET AL.

Examiner

Negussie Worku

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

JEROME GRANT
PRIMARY EXAMINER

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Edgar (USP 6,442,301).

With respect to claim 1, Edgar discloses a method for capturing image and defect information from an image scanned from a medium, (the defect image of the film 14 of fig 1 is scanned by camera 18, as shown in fig 1) comprising the steps of: transmitting visible light from a first light source through the medium to capture image and defect information by a sensor unit during every scan position, (visible light from light source 20 of fig 1, transmitted through medium (film) 14 of fig 1, the image and the defect information captured by sensor (camera) 18 of fig 1); and transmitting infrared light from a second light source through the medium to capture defect information by the sensor unit during every third scan position (infrared light from light source 22 of fig 1, transmitted

through medium (film) 14 of fig 1, the image and the defect in formation captured by sensor (camera) 18 of fig 1, see col.5, lines 25-30).

With respect to claim 2, Edgar discloses a method (as shown in fig 1) further comprising the steps of: aligning the sensor unit (camera 18 of fig 1) and/or the medium (film 14 of fig 1) in a first alignment for transmitting visible light (visible light from light source 20 of fig 1); and aligning the sensor unit (camera 18 of fig 1) and/or the medium (film 12 of fig 1) in a second alignment for transmitting infrared light (infrared light from light source 22 of fig 1).

With respect to claim 3, Edgar discloses a method (as shown in fig 1) wherein visible light and infrared light are not transmitted simultaneously through the medium (as shown in fig 1, and discussed in col.5, lines 28-31, sensor 18 receives image I formation from the frame 12 when it is illuminated by a light source, such as visible light source 20 **or** infrared light source 22, so as both light are transmitted sequentially not simultaneously.

With respect to claim 4, Edgar discloses a method (as shown in fig 1) wherein the medium comprises one of a film, (film 14 and frame 12 of fig 1) a document, and a photograph; see (col.5, lines 25-30).

With respect to claim 5, a method (as shown in fig 1) wherein the steps of transmitting visible light (visible light 20 of fig 1) and infrared light (infrared 22 of fig 1) through the medium occur during a first pass, see (col.5, lines 25-30).

With respect to claim 6, Edgar discloses a method (as shown in fig 1) wherein the step of transmitting visible light occurs during a first pass and the step of transmitting infrared light occurs during a second pass.

With respect to claim 7, Edgar discloses a method, (as shown in fig 1) wherein every scan position comprises three separate scan lines, each scan line associated with either a red, green, and blue channel of the sensor unit (camera 18 of fig 1, inherently provides separate scan lines RGB, see col.3, lines 25-28).

With respect to claim 8, Edgar discloses a method (as shown in fig 1) for capturing image (camera 18 of fig 1, capture image) and detection from an image scanned from a medium, (film 12 of fig 1) comprising the steps of: (1) alternatively transmitting visible light (20 of fig 1) and infrared light (22 of fig 1) through the medium (film 12 of fig 1) for each scan line up to n lines; (2) transmitting only visible light (visible light from visible light source) through the medium (film 12 of fig 1) at each scan line for the next $2n$ scan lines after performing step (1); and (3) repeating steps (1) and (2) until all image and detect information is captured.

With respect to claim 9, Edgar discloses a method (as shown in fig 1), wherein n equals a pixel pitch multiplied by a sensor line pitch divided by a scanning rate.

With respect to claim 10, Edgar discloses a method (as shown in fig 1) for capturing image (camera 18 of fig 1) and defect information from an image scanned from a medium, (film 12 of fig 1) comprising the steps of: transmitting visible light from a first light source (20 of fig 1) through the medium to capture image and defect information by a sensor unit (camera sensor 18 of fig 1) during every scan position (visible light from light source 20 of fig 1, transmitted through medium (film) 14 of fig 1, the image and the defect information captured by sensor (camera) 18 of fig 1); and transmitting infrared light from a second light source (20 of fig 1) through the medium to capture defect information by the sensor unit (camera sensor 18 of fig 1) during every scan position.

With respect to claim 11, Edgar discloses a method (as shown in fig 1) further comprising the steps of: aligning the sensor unit (camera 18 of fig 1) and/or the medium (12 of fig 1) in a first alignment for transmitting visible light (20 of fig 1); and aligning the sensor unit (camera sensor 18 of fig 1) and/or the medium (film 12 of fig 1) in a second alignment infrared light for transmitting infrared light (22 of fig 1).

With respect to claim 12, Edgar discloses a method (as shown in fig 1), wherein visible light (20 of fig 1) is transmitted through the medium (film 12 of fig 1) before the infrared light (22 of fig 1) is transmitted.

With respect to claim 13, Edgar discloses a method (as shown in fig 1), wherein the medium (film 12 of fig 1) comprises one of a film, (12 of fig 1) a document, and a photograph.

With respect to claim 14, Edgar discloses a method (as shown in fig 1) wherein the step of transmitting visible light (20 of fig 1) and infrared (22 of fig 1), through the medium (film 12 of fig 1) occur during pass.

With respect to claim 15, Edgar discloses a method (as shown in fig 1) wherein the step of transmitting visible light (20 of fig 1) occurs during a first pass and the step of transmitting infrared light (22 of fig 1) occurs during a second pass.

With respect to claim 16, Edgar discloses a method (as shown in fig 1), wherein every scan position comprises three separate scan lines, each scan line associated with either a red, green, and blue channel of the sensor unit (camera 18 of fig 1, inherently provides separate scan lines RGB, see col.3, lines 25-28).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (USP 6,442,301), in view of Sugiyama et al. (US2003/0132384 A1).

With respect to claim 17, Edgar discloses a method (as shown in fig 1), a scanner (camera sensor 18 of fig 1) used for capturing image and defect data from a surface of a medium (film 12 of fig 1) containing an image thereon, comprising: a first light source (20 of fig 1) and a second light source (22 of fig 1); a first switch coupled to the first light (20 of fig 1) switch and a second switch coupled to the second light source (22 of fig 1, since both light sources are operated independently the system inherently provide a switch or turn on/of circuit which is so called inverter circuit); a power supply (a power is also inherently supplied to the system from the power source to the system) coupled to the first and second light switches (light source 20 and 22 of fig 1); a sensor unit (camera 18 of fig 1) having a multi-linear imager (18 of fig 1) and optical lens, (lens shown in 18 of fig 1) the optical lens adapted to focus light transmitted through the

surface of the medium (film 12 of fig 1) to the multi-linear imager, (camera 18 of fig 1) thereby capturing image and defect information, see (abstract).

Edgar does not disclose an analog to digital converter adapted to convert the image and defect information to digital image and defect data; a transport mechanism adapted to align the sensor unit and/or the medium for capturing the image and defect information; and a controller adapted to control the transport mechanism.

Sugiyama et al. discloses an analog to digital converter (A/D converter 14 of fig 1) adapted to convert the image and defect information to digital image and defect data, see (col.7 lines 0102-0103); a transport mechanism (a sub-scan motor 6 of fig 1, see col.6, lines 0090) adapted to align the sensor unit (5 of fig 1) and/or the medium (film of fig 1) for capturing the image and defect information, see (col.3, lines 0033-0034); and a controller (controller 20 of fig 1) the transport mechanism, (a sub-scan motor 6 of fig 1, see col.6, lines 0090).

Since Edgar and Sugiyama et al., are directed toward at least an image reading and pickup apparatus, the purpose disclose an analog to digital converter adapted to convert the image and defect information to digital image and defect data; a transport mechanism adapted to align the sensor unit and/or the medium for capturing the image and defect information; and a controller adapted to control the transport mechanism, would have been recognized by Edgar as specifically set forth by Sugiyama et al.

It would have been obvious to rearrange or configure image-reading device 1 of, of Edgar, with imaging device fig 1, of Sugiyama et al., for the purpose of reducing

foreign matters and flaw to the image data and avoiding image deterioration on the read documents, as discussed by Sugiyama et al., see col.1, lines 005-0006.

With respect to claim 18, Edgar discloses a method (as shown in fig 1), wherein the first light source (20 of fig 1) generates visible light, (visible light generated by light source 20 of fig 1) and the second light source (22 of fig 1) generates infrared light.

With respect to claim 19, Edgar discloses a method (as shown in fig 1), an apparatus, wherein the first light source (20 of fig 1) is used to capture image and defect information and the second light source (22 of fig 1) is used to capture defect information.

With respect to claim 20, Edgar discloses an apparatus (as shown in fig 1), wherein the first light source (20 of fig 1) and the second light source (22 of fig 1) do not generate light simultaneously.

With respect to claim 21, Edgar discloses an apparatus (as shown in fig 1), wherein the transport mechanism aligns the sensor unit (camera sensor 18 of fig 1) and/or the medium (film 12 of fig 1) in a first alignment for capturing image information and in a second alignment for capturing defect information, see (abstract).

With respect to claim 22, Edgar discloses an apparatus (as shown in fig 1), wherein the medium comprises one of a film (film 12 of fig 1), a document, and a photograph.

With respect to claim 23, Edgar discloses a method (as shown in fig 1), of digitizing a source image, (camera 18 of fig 1) comprising: collecting visible light data (20 of fig 1); and collecting infrared light (22 of fig 1) data simultaneously on at least two color sensor channels (camera sensor 18 of fig 1).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Negussie Worku whose telephone number is 305-5441. The examiner can normally be reached on 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on 703-305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

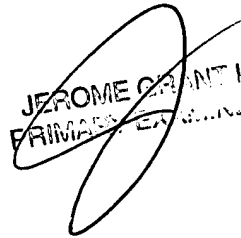
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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Negussie Worku

06/13/04


JEROME GRANT II
PRIMACY EXAMINER